**USCT ALL-IN-ONE OPERATIONAL NOTE** rev. 3.0 (r 2.9) (4182002)

The USCT has been engineered to be the most advanced high end smart card development interface to date, yet the most user friendly. The following is a brief description of how to set up the USCT so that any smart card development task may be performed. If you have any questions in regards to the installation and/or operation of the USCT, please contact Dataphd, Inc., Technical Support Department at techsupport@dataphd.net.

Note: The USCT is a fully hardware based smart card interface development terminal. The universal reader/writer circuitry incorporated into the USCT does not rely on any type of Atmel AVR code in order for the unit to function in universal reader/writer mode. If you are using a Microsoft® PC/SC compliant application, please install the USCT PC/SC driver to enable the PC/SC functions of the USCT within the Windows® environment. (Available at www.dataphd.net)
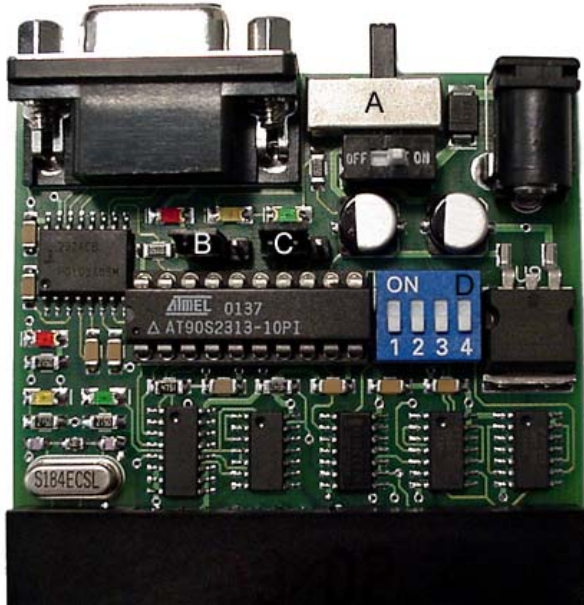
With the host computer system and the USCT turned OFF, locate a free 9-pin serial port on the rear of the host computer system. Connect the FEMALE end of the DB9 cable to the host computer system and the MALE end of the DB9 able to the USCT. Now, connect the power adapter to the USCT and turn the host computer system ON.

Once the computer system has started in DOS® or Windows®, you may now turn the USCT on via the on board ON/OFF switch located next to the mode selector switch. The USCT mode selector switch (LOCATION A) may then be selected to the desired operating mode. With the mode selector switch closest to the DB9 connector, the unit is in repair/format terminal mode. This can be confirmed by observing both RED LED's illuminating when using the USCT rev. 2.0/2.9 or the single RED LED closest to the I.C.P. jumper (LOCATION B) illuminating when using the USCT rev 3.0. With the mode selector switch closest to the DC Jack, the unit is universal hardware based reader/writer mode. This can be confirmed when using either rev 2.0,2.9, or 3.0 by observing the single RED LED illuminating to the left of the AT90S2313-10PI microcontroller and just below the SDLOGIC Intersil RS232 chip..

The USCT supports I.C.P. (In-Circuit-Programming) of the socket mounted AT90S2313-10PI Atmel micro-controller for easy AVR flash upgrades. The USCT is shipped from the factory with the Atmel PIN 1 / I.C.P. function ENABLED as shown above (LOCATION B). If you wish, you may disable PIN 1 of the Atmel (The AVR reset pin) by moving the jumper to the right one pin location.
Please note: The USCT is shipped with the Atmel BLANK! You will need to flash the Atmel in Repair Terminal Mode.

In repair/format terminal mode, the USCT also allows the developer to enable/disable the unit's enhanced timing buffer circuitry via the ETB jumper (LOCATION C), which is ENABLED from the factory. This feature integrates enhanced buffering technology for smart cards that require data I/O speeds of 38,400 baud or above during the repair/format process. This feature has also been tested to improve I/O data reliability for slower smart cards as well so it is recommended that this feature be enabled for most applications. To disable this feature, simply move the ETB jumper to the right one pin location.